

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte CAROLYN JAYNE BROWN, JONATHAN RICHARD CLARE,  
and JOHAN JULIAAN SERAFIN WAUBEN

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Appeal No. 2000-0018  
Application No. 08/860,941

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ON BRIEF

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Before GARRIS, PAK, and OWENS, Administrative Patent Judges.  
OWENS, Administrative Patent Judge.

*DECISION ON APPEAL*

This is an appeal from the examiner's final rejection of claims 1-3, 5-8, 10-15 and 20-22, which are all of the claims remaining in the application.

### *THE INVENTION*

The appellants claim a detergent composition comprising a small particle size zeolite, an amylase enzyme and a specified alkoxyated nonionic surfactant. Claim 1 is illustrative:

1. A detergent composition comprising:

(a) a zeolite builder having a particle size, expressed as a  $d_{50}$  value, of less than 1.0 micrometers;

(b) an amylase enzyme; and

(c) an alkoxyated nonionic surfactant having a hydrophilic lipophilic balance value of less than 9.5 selected from the group consisting of alkoxyated adducts of fatty alcohols containing an average of less than 5 alkylene oxide groups per molecule.

### *THE REFERENCES*

Watson et al. (Watson) 1996	5,565,145	Oct. 15,
	(effective filing date May 25,	
1994)		
Kasturi et al. (Kasturi) 1998	5,707,950	Jan. 13,
	(effective filing date Nov. 18,	
1994)		
Chapple 1993	0 552 053	Jul. 21,
(European patent application)		
Svendsen 1994	WO 94/02597	Feb. 3,
(PCT application)		

*THE REJECTIONS*

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1-3, 5, 7, 8, 10-15 and 20-22 over Watson in view of Kasturi and over these references further in view of Chapple; and claim 6 over Watson in view of Kasturi, Chapple and Svendsen.

*OPINION*

We affirm the aforementioned rejections.

The appellants state that the claims stand or fall in three groups: 1) claims 1-3, 5, 7, 8, 10-14 and 20-22, 2) claim 15, and 3) claim 6 (brief, page 3). We therefore limit our discussion to claims 6, 15 and one claim from the other group, i.e., claim 1. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

*Rejections of claim 1 over Watson in view of Kasturi and over these references further in view of Chapple*

Watson discloses a detergent composition which can contain 1) a builder which can be zeolite MAP (col. 9, line 35) which, the appellants acknowledge (specification, page 1), was known in the art to preferably have a particle size,

expressed as a  $d_{50}$  value, of less than 1.0 micrometers,<sup>1</sup> 2) an enzyme which can be an amylase enzyme (col. 10, line 58),<sup>2</sup> and 3) a surfactant which can be a conventional nonionic surfactant such as a  $C_{12}$ - $C_{18}$  alkyl ethoxylate (col. 8, lines 10-11).

Watson does not disclose that the  $C_{12}$ - $C_{18}$  alkyl ethoxylate can have less than 5 alkylene oxide groups per molecule and a hydrophilic lipophilic balance value of less than 9.5. However, the teaching that the composition can contain a conventional  $C_{12}$ - $C_{18}$  alkyl ethoxylate surfactant would have fairly suggested, to one of ordinary skill in the art, using any  $C_{12}$ - $C_{18}$  alkyl ethoxylate known to be suitable for use in a detergent composition, such as the condensation product of a  $C_{12}$ - $C_{13}$  linear alcohol with 3.0 moles of ethylene oxide, having a hydrophilic lipophilic balance value of 8-11, preferably 8-

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<sup>1</sup> It is axiomatic that our consideration of the prior art must, of necessity, include consideration of the admitted prior art. See *In re Hedges*, 783 F.2d 1038, 1039-40, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Davis*, 305 F.2d 501, 503, 134 USPQ 256, 258 (CCPA 1962).

<sup>2</sup> The appellants further acknowledge that it was known in the art to use zeolite MAP in combination with an enzyme (specification, page 2).

10, disclosed by Kasturi (col. 6, lines 12-13 and 22-24).

The detergent composition recited in the appellants' claim 1, therefore, would have been *prima facie* obvious to one of ordinary skill in the art over the combined teachings of Watson and Kasturi. The composition recited in this claim also would have been *prima facie* obvious to one of ordinary skill in the art over these references further in view of Chapple, which the examiner relies upon (answer, page 5) for evidence that zeolite MAP can have the particle size recited in the appellants' claim 1 (page 4, line 8).

Moreover, Kasturi teaches that the detergent composition can contain an amylase enzyme such as Termamyl® (col. 12, line 15; col. 12, line 66 - col. 13, line 1), which is an amalyse enzyme which can be used in the appellants' composition (specification, page 6), and can contain zeolite MAP (col. 14, lines 35-36). Thus, Kasturi itself would have fairly suggested, to one of ordinary skill in the art, the detergent composition recited in the appellants' claim 1.

The appellants argue that Watson, Kasturi and Chapple are not directed toward solving the problem confronted by the

appellants, namely, white residue formation when a small size zeolite is used in a detergent composition (brief, pages 5 and 7-9). This argument is not persuasive because to establish a *prima facie* case of obviousness, references need not be combined for the purpose of solving the problem solved by the appellants. See *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996); *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (*en banc*), *cert. denied*, 500 U.S. 904 (1991); *In re Lintner*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Use of Kasturi's surfactant in Watson's detergent composition would have been *prima facie* obvious to one of ordinary skill in the art for the reason given above.

The appellants argue that Watson, Kasturi and Chapple are not combinable because they are not directed toward the same problem (brief, pages 5 and 8-9). Watson and Kasturi would have been combined by one of ordinary skill in the art for the reason given above, and Chapple was relied upon by the examiner merely for a disclosure of a property of zeolite MAP.

Hence, we are not convinced by the appellants' argument.

The appellants argue that each of Watson and Chapple does not disclose every element of the claimed invention (brief, pages 6 and 9-10; reply brief, page 5). The deficiency in this argument is that the appellants are attacking the references individually when the rejection is based on a combination of references. See *In re Keller*, 642 F.2d 413, 426, 208 USPQ 871, 882 (CCPA 1981); *In re Young*, 403 F.2d 754, 757-58, 159 USPQ 725, 728 (CCPA 1968). Watson in combination with the other applied references, as discussed above, would have fairly suggested the composition recited in the appellants' claim 1 to one of ordinary skill in the art.

The appellants argue that Kasturi does not disclose the claimed invention in an example (brief, pages 6-7). Kasturi, however, is not limited to its examples. See *In re Fracalossi*, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); *In re Mills*, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972). Instead, all disclosures in the reference must be evaluated for what they would have fairly suggested to one of ordinary skill in the art. See *In re Boe*, 355 F.2d 961, 965,

148 USPQ 507, 510 (CCPA 1966). As discussed above, the disclosure of Kasturi as a whole would have fairly suggested the composition recited in the appellants' claim 1 to one of ordinary skill in the art.

For the above reasons we conclude that the *prima facie* case of obviousness of the composition recited in the appellants' claim 1 has not been effectively rebutted by the appellants. Accordingly, we affirm the rejections of this claim.

*Rejections of claim 15 over Watson in view of Kasturi  
and over these references further in view of Chapple*

Claim 15, which depends from claim 1, recites that the composition is in liquid form and has a pH of from 6.5 to 10.5.

Watson's composition can be in liquid form (col. 25, lines 46-47; col. 26, line 16) and preferably is formulated such that, during aqueous cleaning operations, the wash water has a pH of about 6.5 to about 12, preferably between about 7.5 and 11 (col. 26, lines 26-29). This teaching would have fairly suggested, to one of ordinary skill in the art, making a detergent composition based upon either the combined



teachings of Watson and Kasturi or the combined teachings of these references further with Chapple, such that it is in liquid form and has a pH in the 6.5-12 range.

Kasturi discloses that his detergent composition can be in liquid form (col. 24, line 66; col. 25, line 20) and that the treatment solution pH is preferably 7 to 11, especially 7.5 to 10.5 (col. 20, lines 50-51). For this reason and that given above regarding claim 1, Kasturi would have fairly suggested the composition recited in the appellants' claim 15 to one of ordinary skill in the art.

The appellants argue that Watson's pH is that of the wash water rather than the detergent (brief, page 7; reply brief, page 4). It reasonably appears, however, that one of ordinary skill in the art would have expected a desired wash water pH to be obtained by use of a detergent having that pH rather than another pH. The appellants have provided no evidence or reasoning to the contrary.

The appellants argue that Watson discloses a pH optimum of 5 to 9.5 for bacterial and fungal cellulase, but does not disclose a pH optimum for amalyse (reply brief, page 4). For a *prima facie* case of obviousness to be established, however,

the optimum pH need not be disclosed. All that is required is that the teachings from the applied prior art appear to have suggested the claimed subject matter to one of ordinary skill in the art. See *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). As discussed above, the applied prior art would have provided one of ordinary skill in the art with such a suggestion.

The appellants argue that although the heavy duty liquid cleaning composition in Kasturi's example in which the pH is up to 7.5 (col. 26, line 13) contains an amylase enzyme and an alkoxyated alcohol having an average of 3 ethylene oxide groups per molecule, it does not contain a zeolite, particularly the appellants' small particle size zeolite (brief, page 8). Kasturi's disclosure as a whole, however, including the portion which discloses that the composition can contain zeolite MAP (col. 14, lines 35-36), would have fairly suggested, to one of ordinary skill in the art, the composition recited in the appellants' claim 15.

Accordingly, we affirm the rejections of the appellants' claim 15.

*Rejection of claim 6 over Watson*

*in view of Kasturi, Chapple and Svendsen*

The appellants' claim 6, which depends from claim 1, recites that the amylase enzyme has been modified such that its oxidative stability is enhanced.

Svendsen discloses a mutant "-amylase which exhibits improved stability in the presence of oxidizing agents and is well suited as a detergent additive (abstract; page 1, lines 15-20). This disclosure would have fairly suggested, to one of ordinary skill in the art, using this mutant "-amylase in the detergent composition of Watson or Kasturi to obtain the benefit of improved oxidative stability. Thus, the composition recited in the appellants' claim 6 would have been *prima facie* obvious to one of ordinary skill in the art over the combined teachings of Watson, Kasturi, Chapple and Svendsen, and also over the combined teachings of Kasturi and Svendsen.

The appellants merely argue that Svendsen does not remedy the deficiencies in Watson, Kasturi and Chapple with respect to the composition recited in claim 1 (brief, page 11). This argument is not persuasive for the reasons given above

Appeal No. 2000-0018  
Application No. 08/860,941

regarding the rejections of that claim. Hence, we affirm the rejection of claim 6.

*DECISION*

The rejections under 35 U.S.C. § 103 of claims 1-3, 5, 7, 8, 10-15 and 20-22 over Watson in view of Kasturi and over these references further in view of Chapple, and claim 6 over Watson in view of Kasturi, Chapple and Svendsen, are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

*AFFIRMED*

<i>BRADLEY R. GARRIS</i>	)	
<i>Administrative Patent Judge</i>	)	
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<i>CHUNG K. PAK</i>	)	<i>BOARD OF PATENT</i>
<i>Administrative Patent Judge</i>	)	<i>APPEALS AND</i>
	)	<i>INTERFERENCES</i>

Appeal No. 2000-0018  
Application No. 08/860,941

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